BENGAL BOULEVARD ROUNDABOUT

A Pedestrian Crossing that Allows Cars

PROJECT HISTORY

PROJECT FUNDING		
TYPE	**COST (approx.)**	**FUNDING SOURCE**
Construction Cost	$2.5 Million	Federal Transportation Improvement Program (CMAQ)
Right-of-Way Acquisition	$427, 000	Salt Lake County Corridor Preservation Fund
Total	**$2.9 Million***	

Local Funding	**$0.00**

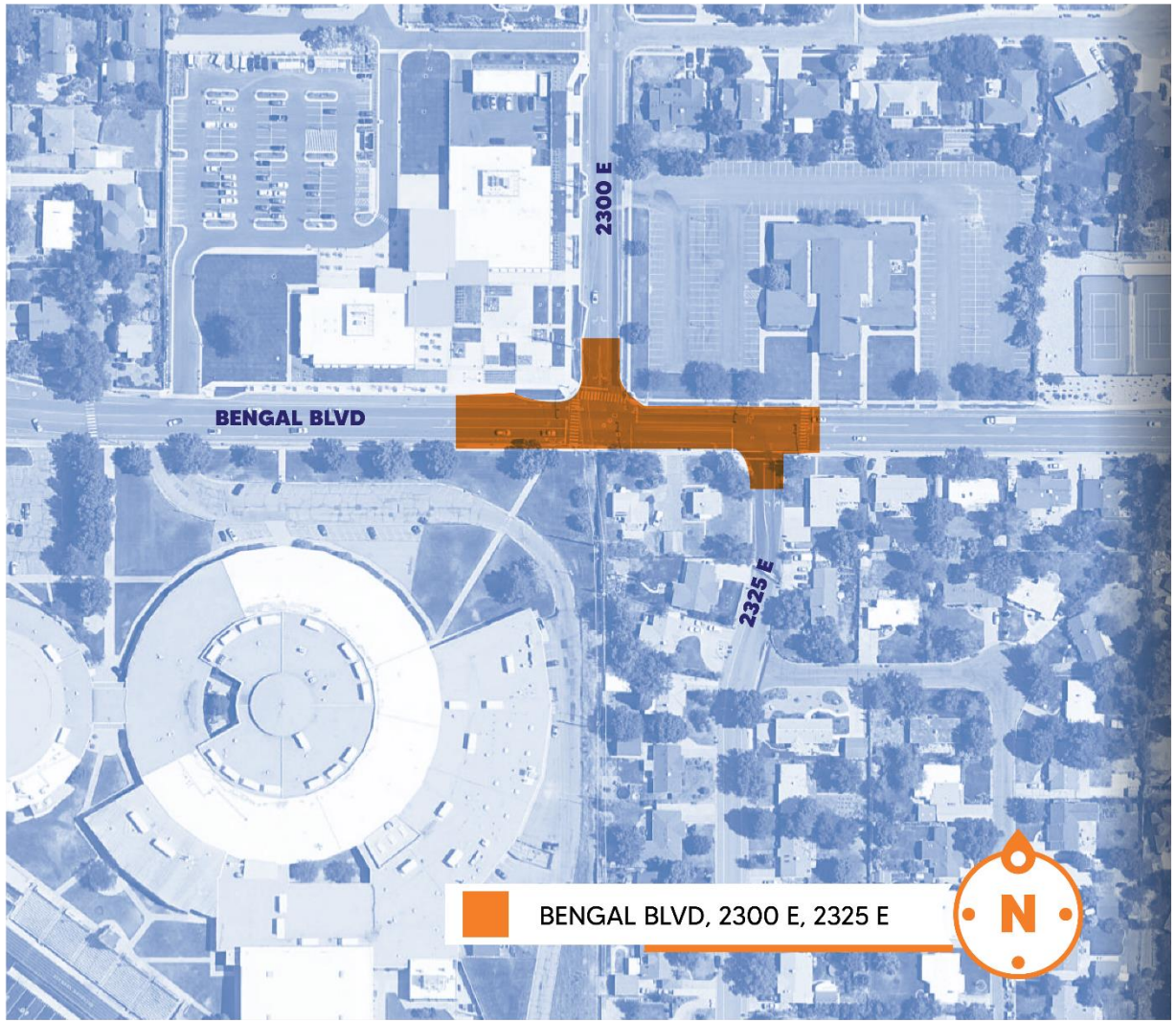
* Added to the Statewide Transportation Improvement Program (STIP) on October 8, 2013

PROJECT NEED

Bengal Blvd, 2300 E, and 2325 E experience significant delay as a result of being an offset intersection with less than 200 feet of separation.

Significant delay is observed during peak hours (7-9 am and 4-7 pm), and is exacerbated by the locations of the new City Hall and Brighton High School.

As a result, there is a high number of accidents reported at these intersections (approximately 76 from 2010 to 2019).

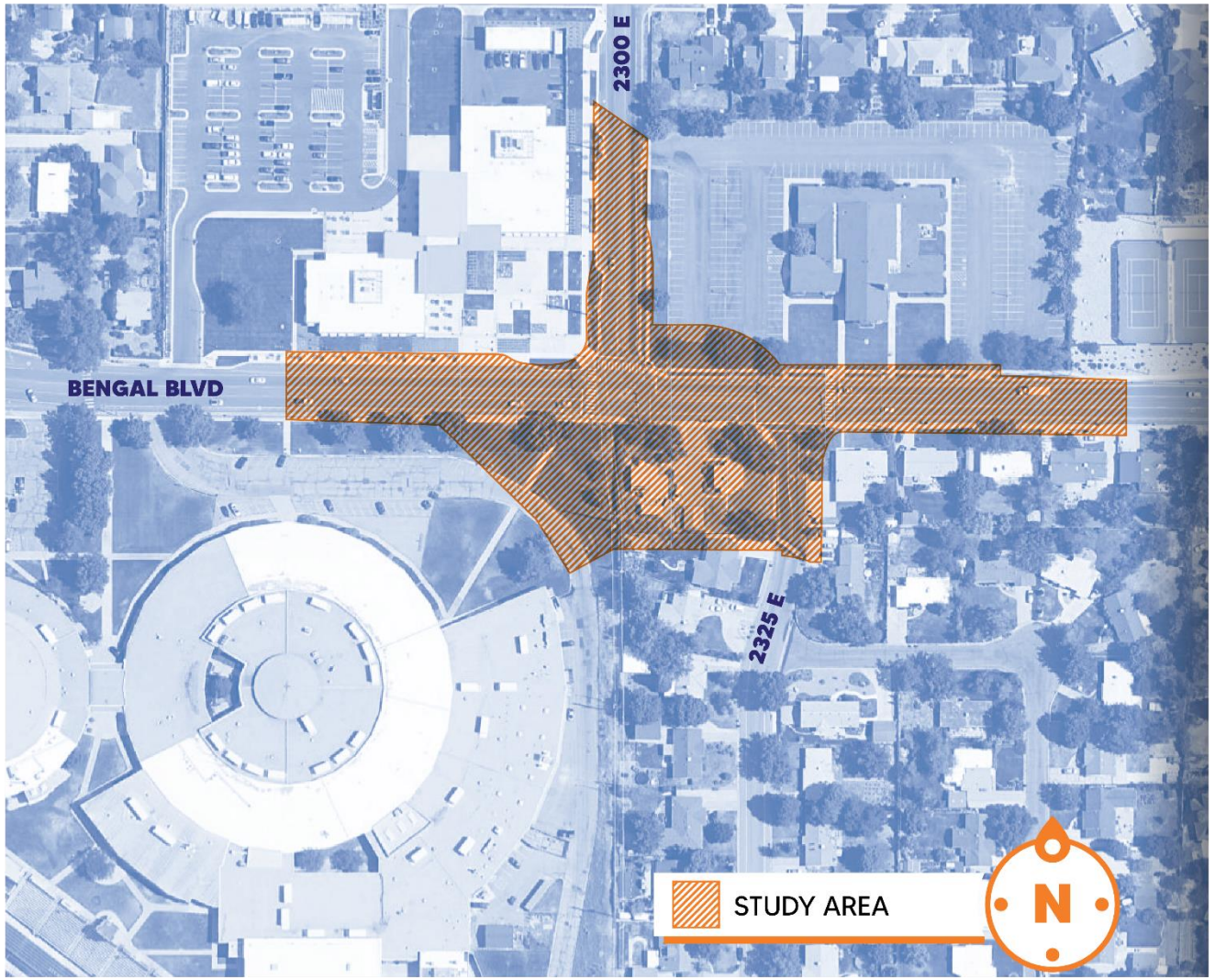


PROJECT GOALS

- Improve Pedestrian Safety
- Improve Traffic Safety
- Improve Air Quality/Reduce Emissions
- Reduce Traffic Delay

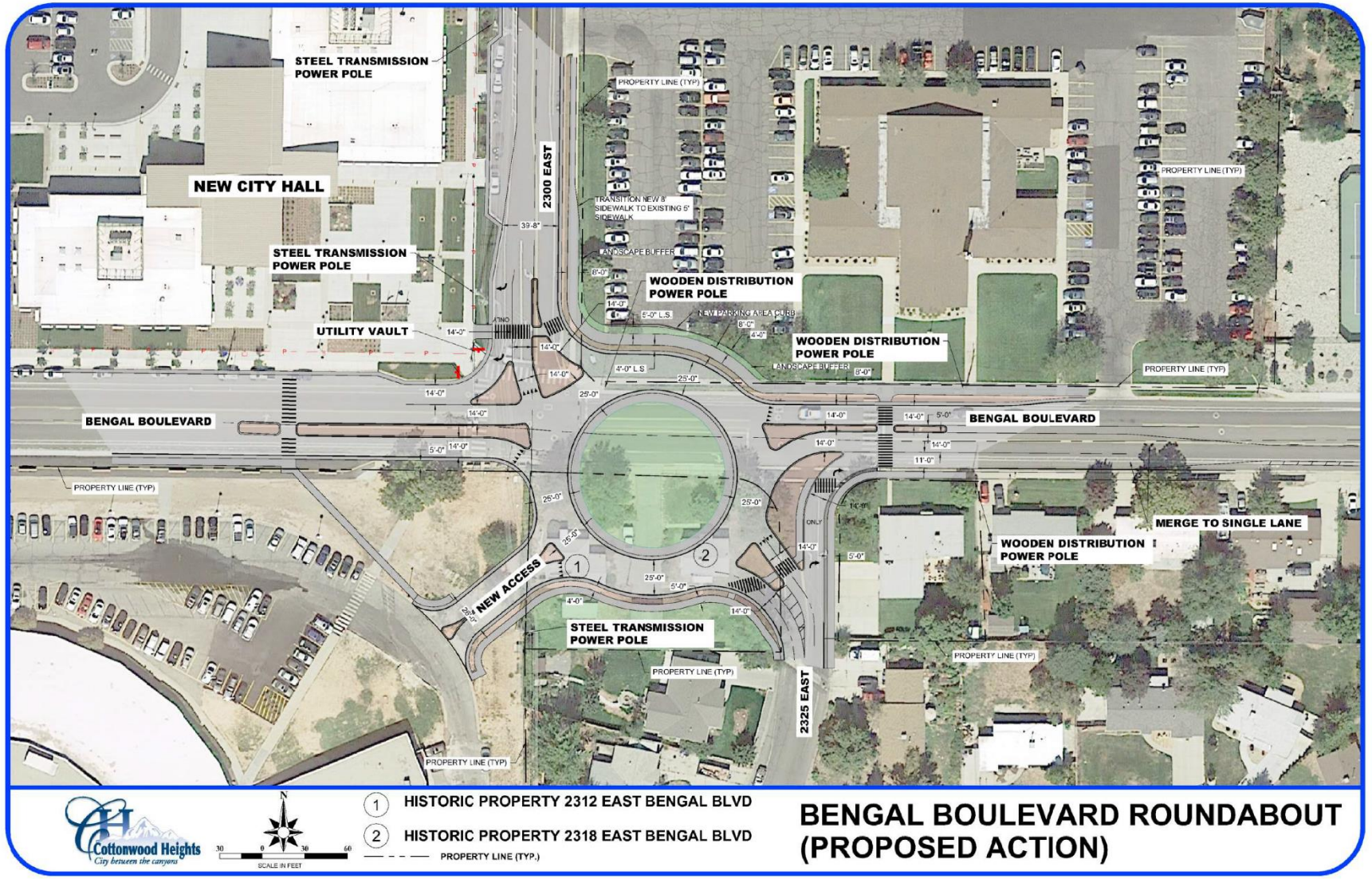
ENVIRONMENTAL CLEARANCE

- 2019 – The City completed the preliminary design and environmental clearance phase.



PRELIMINARY DESIGN

A roundabout was determined to be the proper design concept to meet the goals of the project.



Source: Gilson Engineering, 2019

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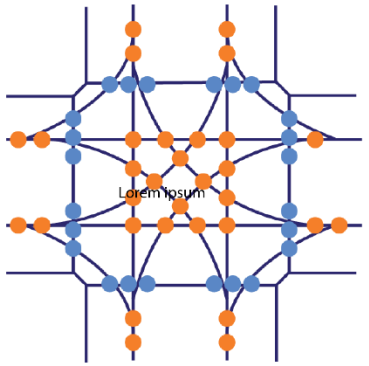
WHY A ROUNDABOUT

Compared to traditional intersections, roundabouts are more efficient and safer.

Benefits include:

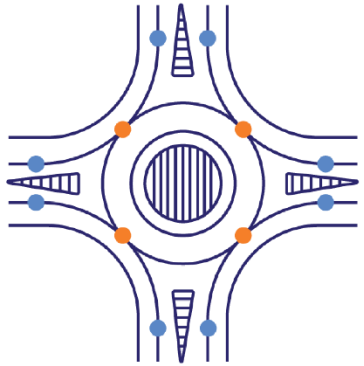
- Fewer conflict points compared to an intersection

SIGNALIZED INTERSECTION



- **32 Vehicle to vehicle conflicts**
- **24 Vehicle to pedestrian conflicts**

ROUNDABOUT



- **8 Vehicle to vehicle conflicts**
- **8 Vehicle to pedestrian conflicts**

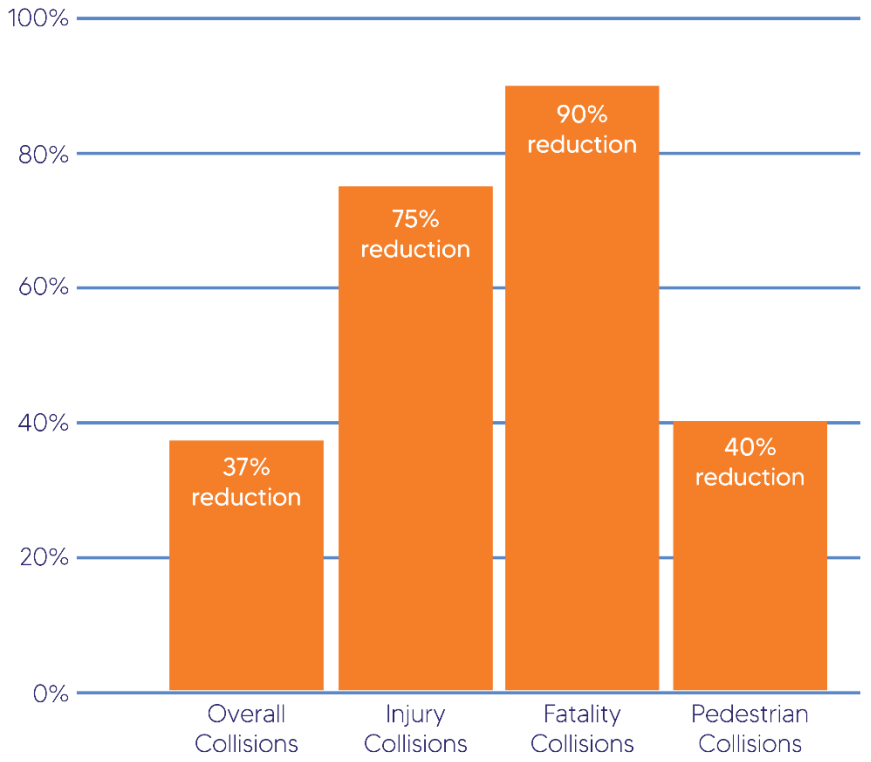
WHY A ROUNDABOUT

Compared to traditional intersections, roundabouts are more efficient and safer.

Benefits include:

- Fewer conflict points compared to an intersection
- Lower travel speeds (15-20 mph) - reduce the severity of collisions
- Curved roads and one-way traffic eliminate potential T-bone and head on collisions
- Reduce traffic delay and promote a continuous flow of traffic - No light to beat
- Require less maintenance cost
- More aesthetically pleasing

Reduction in Collisions



Source: Federal Highway Administration & Insurance Institute for Highway Safety (FHWA & IHS)

REDUCED VEHICLE EMISSIONS = IMPROVED AIR QUALITY

How Does a Roundabout Improve Air Quality?

- Unlike signals, roundabouts keep traffic moving
- By reducing vehicle idling, roundabouts significantly decrease fuel consumption and emissions
- Pollutants reduced are principally **carbon monoxide, nitrogen oxide, volatile organic compounds, PM10 and hydro carbons**

Bengal Boulevard Roundabout – Air Quality Analysis

- The existing offset intersection's average daily traffic (ADT) = 25,350 cars
- Reduces daily vehicle delay by 106.6 vehicle hours traveled (VHT)
- Emissions **Reduction: 4.37 tons/year**

WHAT WE HEARD

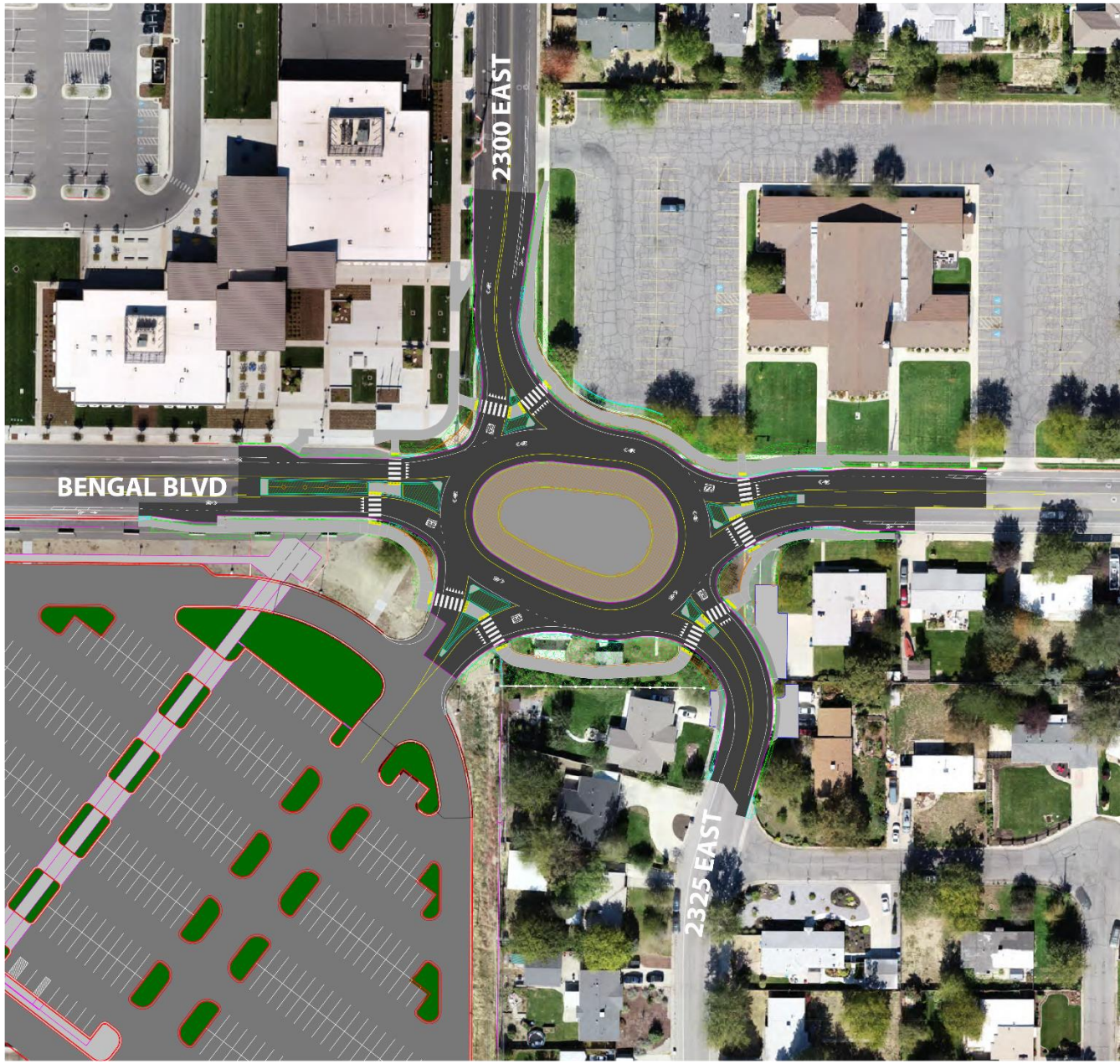
A public hearing for the environmental document was held on April 18, 2019.

We heard an overwhelming concern for student and pedestrian safety at the roundabout.

WE LISTENED.

A REFINED REDESIGN

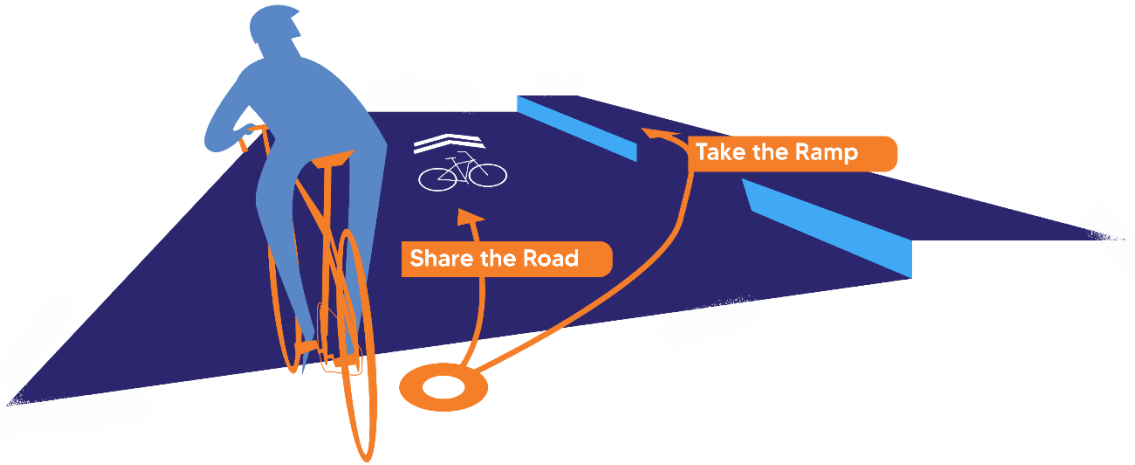
- The oval configuration works best with the offset intersection
- The oval shape slows vehicle speeds through the roundabout
- Reduces the number of pedestrian and vehicle conflict points by three: 1) eliminated bypass right turns southbound to westbound on 2300 E, 2) Bengal Blvd eastbound to southbound 2325 E and 3) northbound to eastbound on 2325 E)
- Improves driver line of sight while navigating the roundabout
- Reduces the number of lanes and turning movements
- Improves the turning radius for buses, trucks and emergency vehicles
- Implements multiple pedestrian crossing enhancements

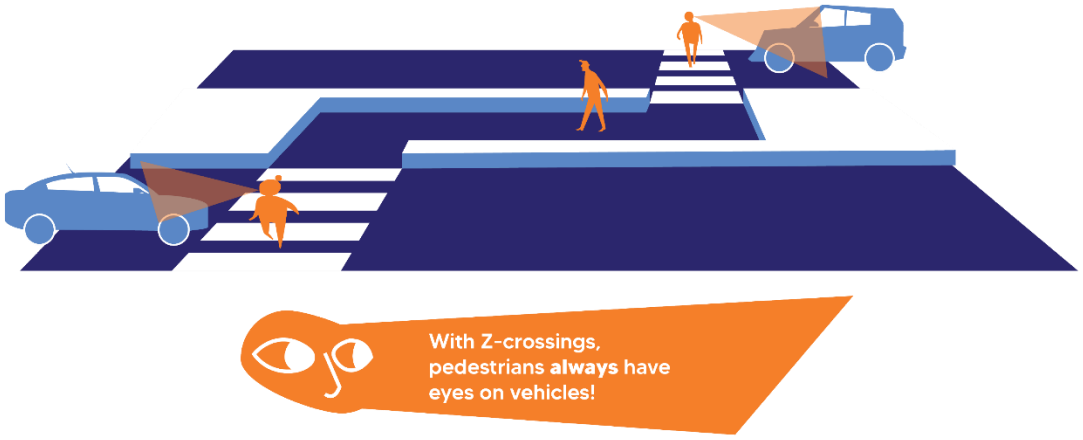


A ROUNDABOUT FOR ALL USERS

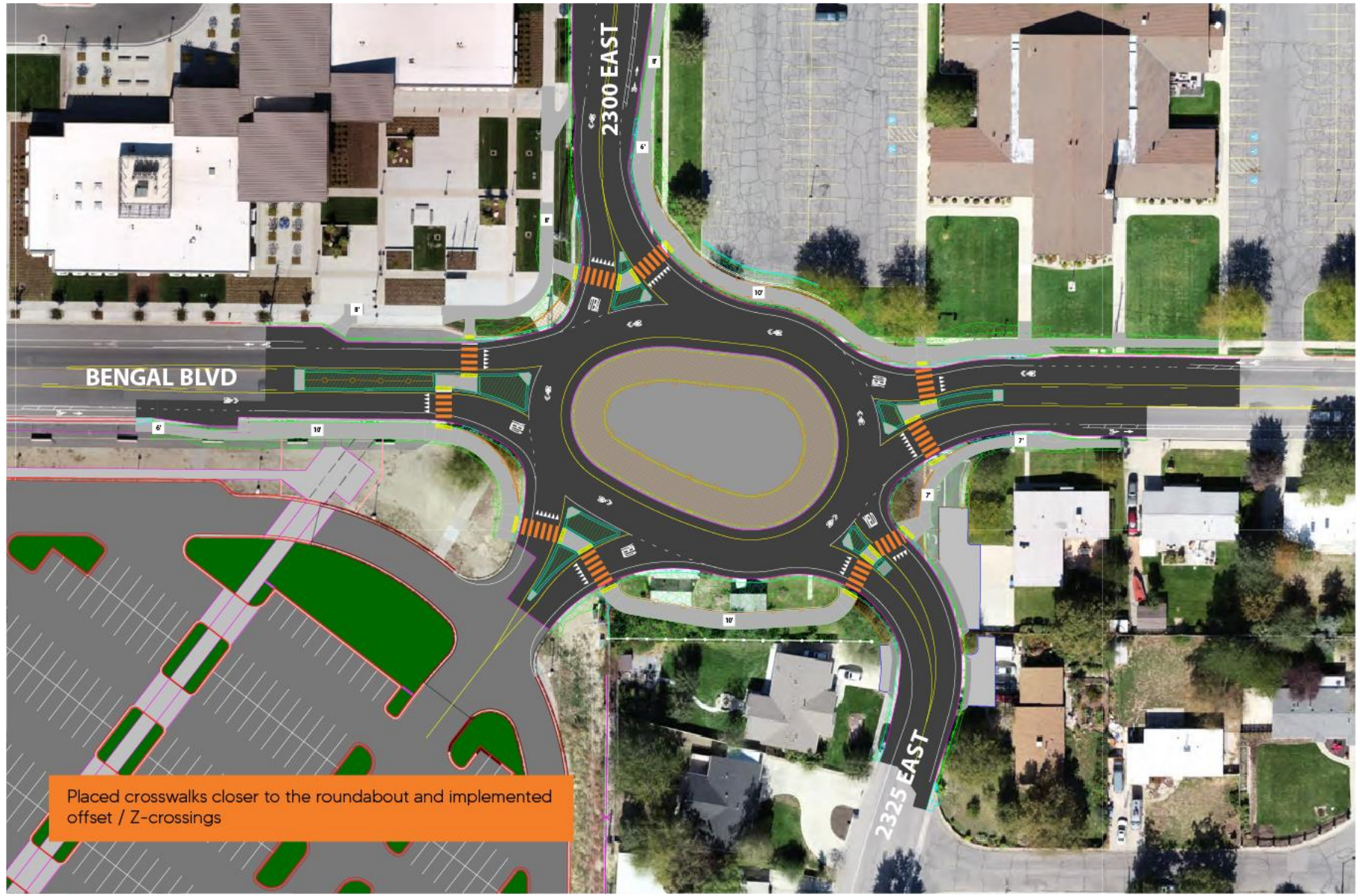
The new design includes:

- Reduced vehicle speeds
- Crosswalks located in the line of site of vehicles
- Crosswalks located prior to turning vehicles accelerating
- Pedestrian refuge islands and offset/Z-crossings
- Pedestrian activated rectangular rapid flashing beacons (RRFB) at each crossing
- A 7-10 foot multi-use path circulating around the intersection
- Ramps from bike lanes allowing cyclists to enter and exit the multi-use path (to and from bike lanes)
- Share the roadway symbols for cyclists utilizing the roadway





IMPROVED PEDESTRIAN AND BICYCLIST MOBILITY



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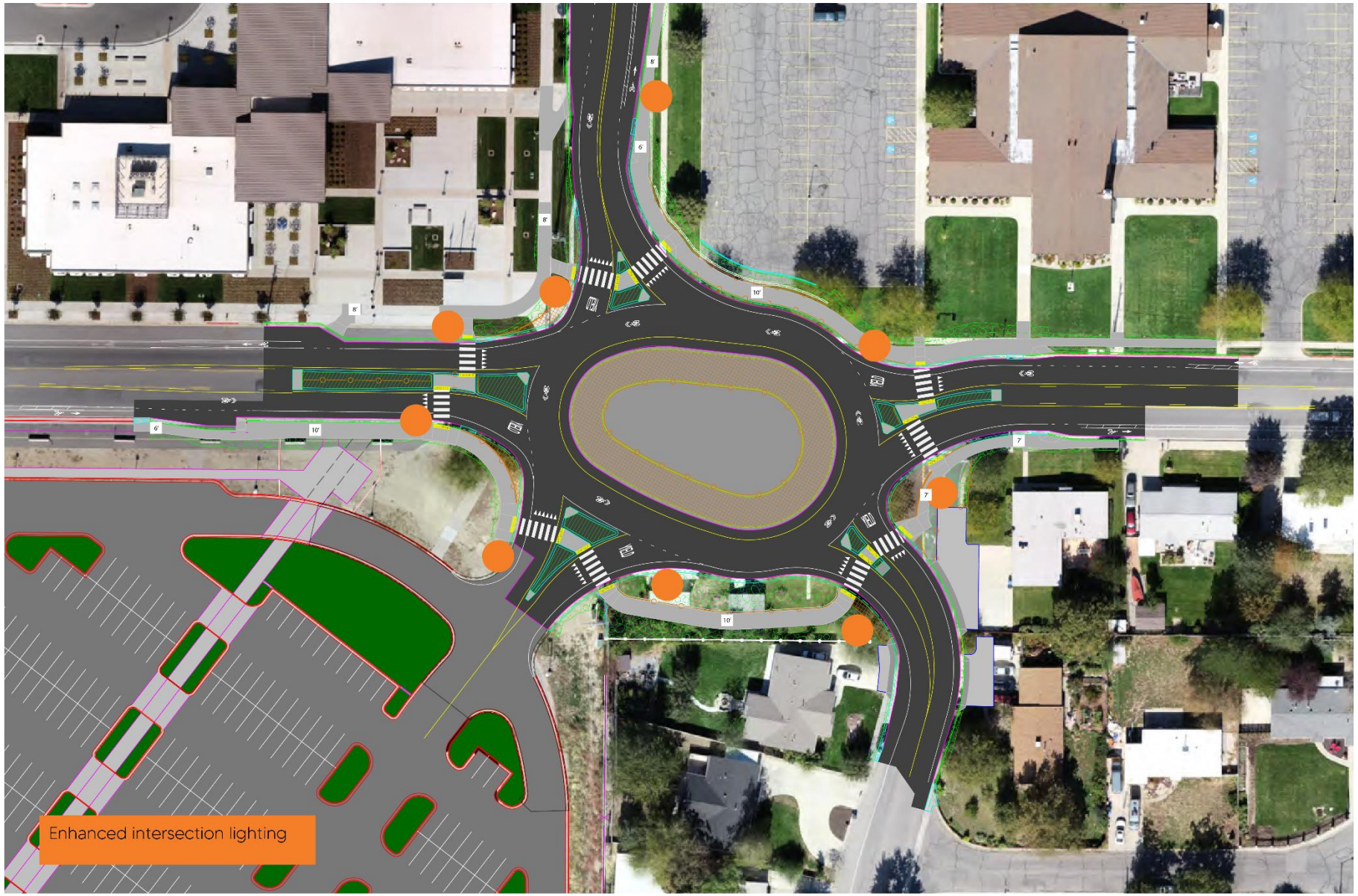

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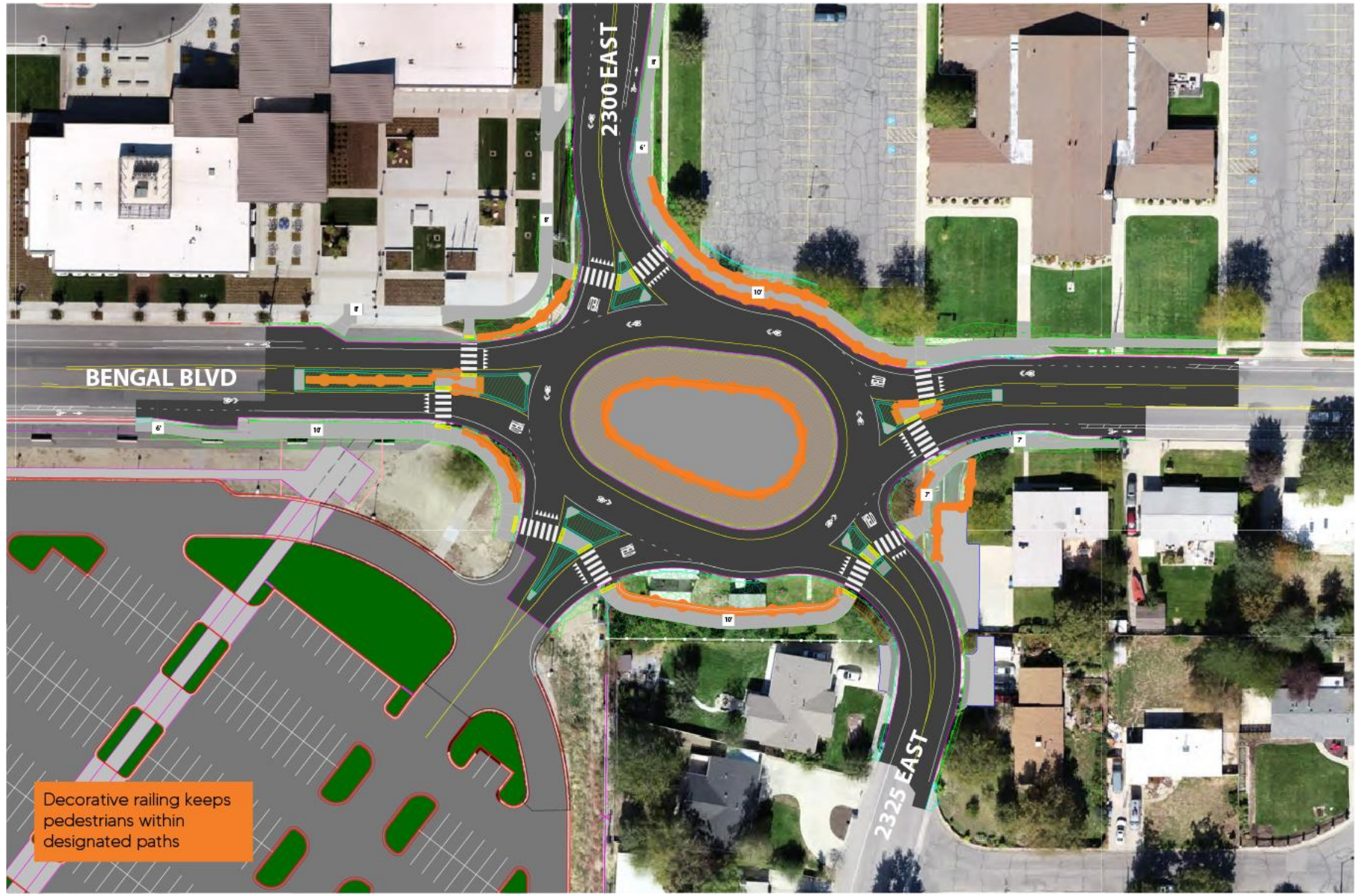

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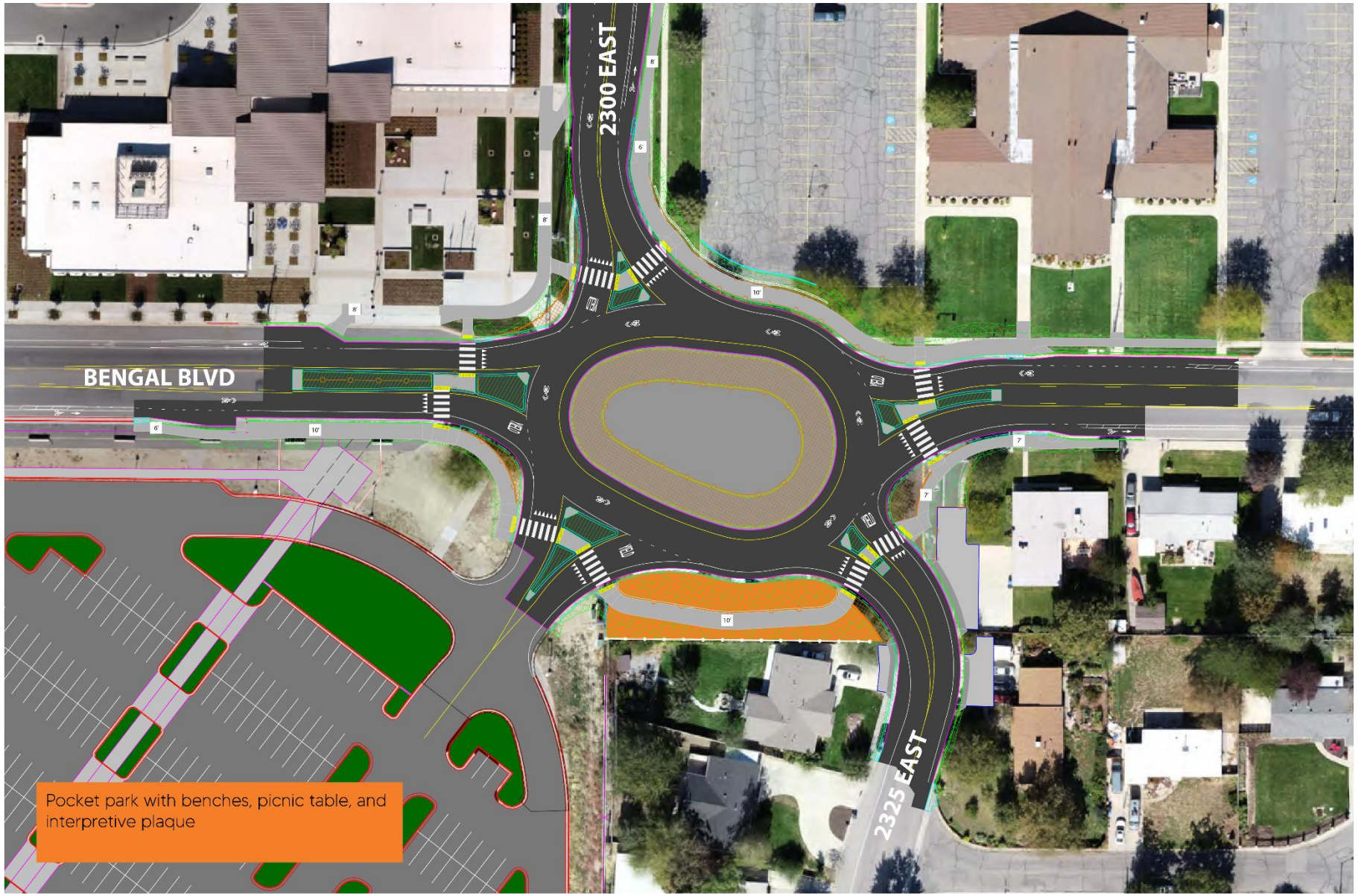

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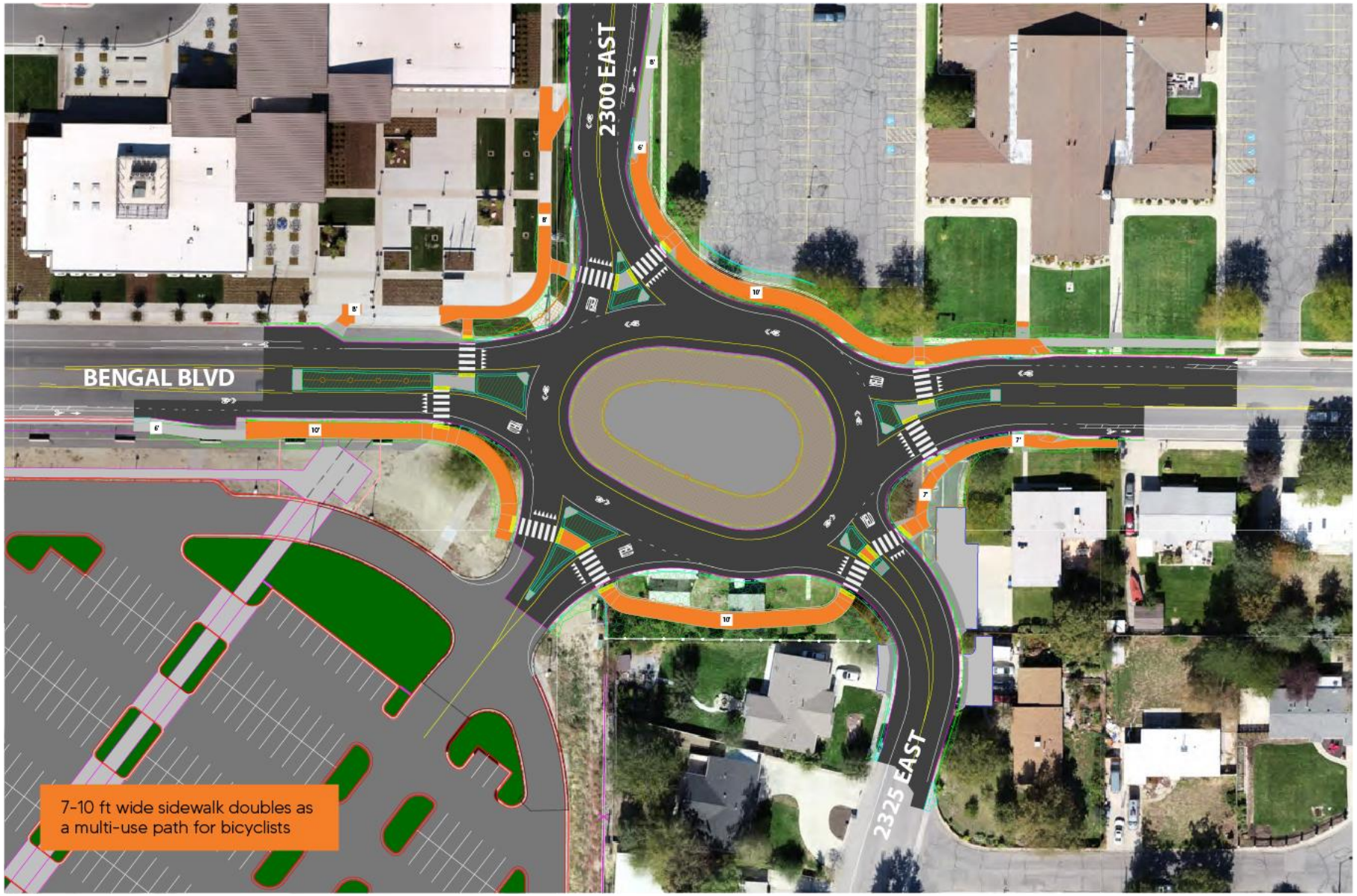

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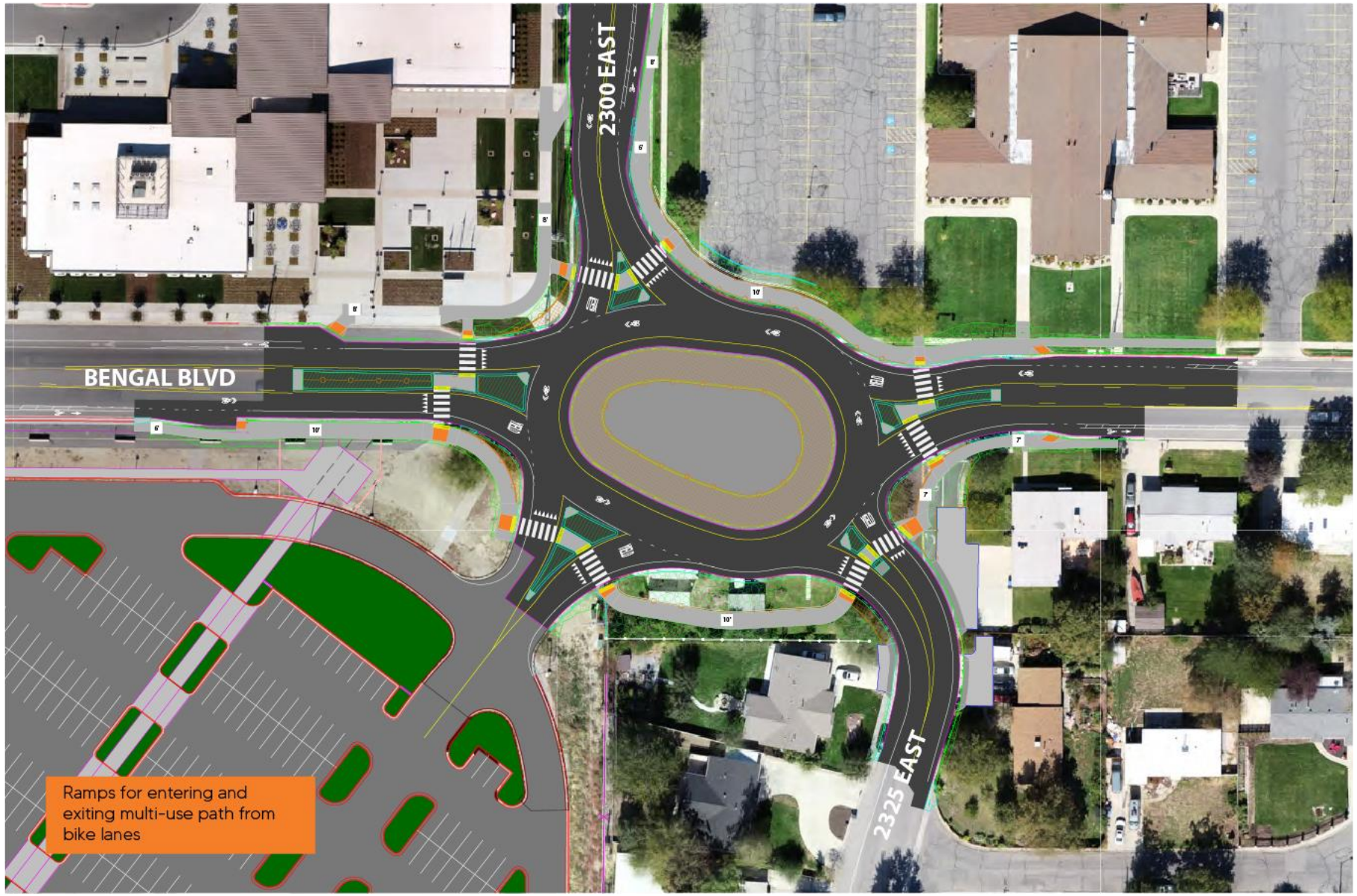

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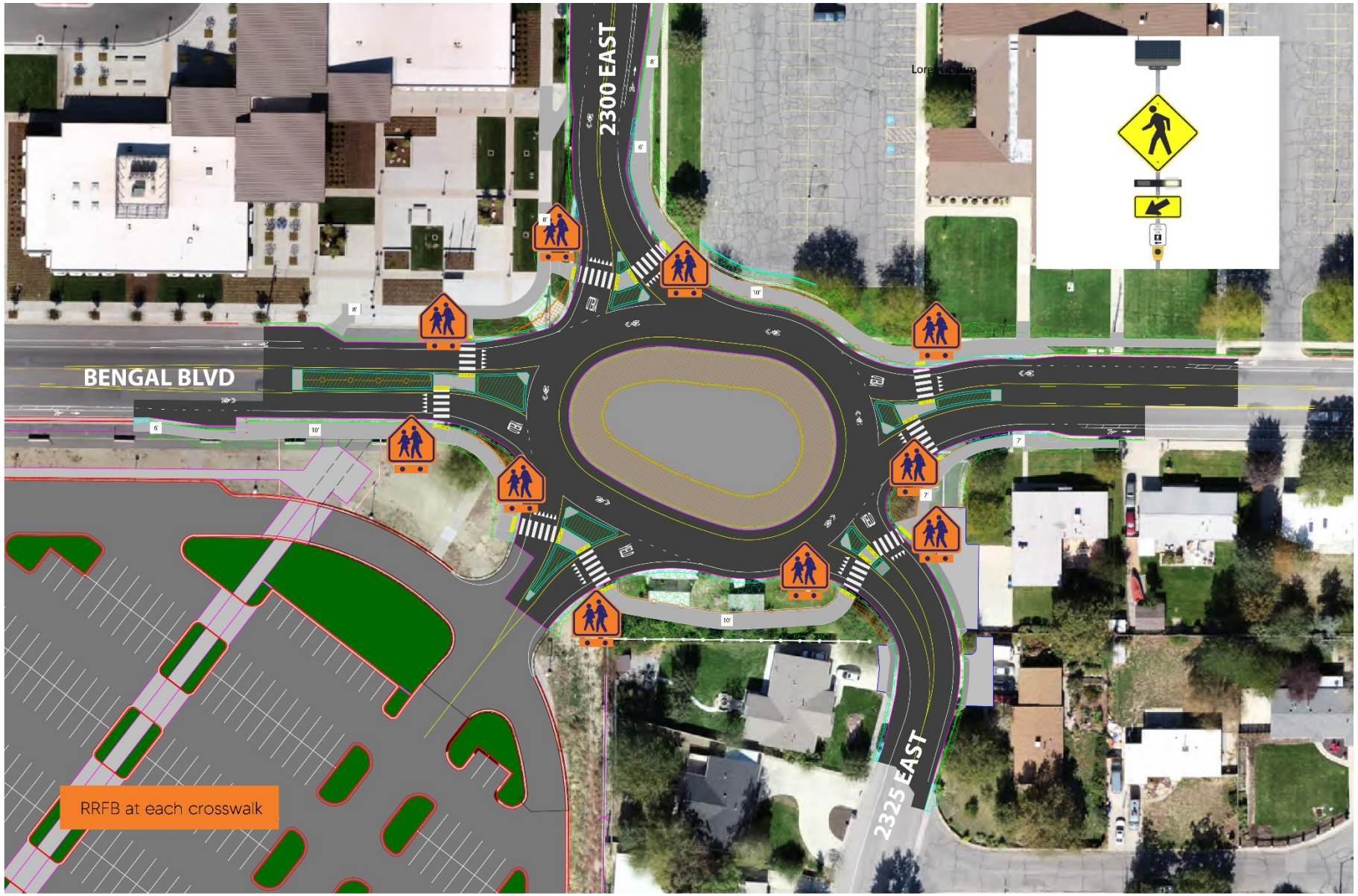

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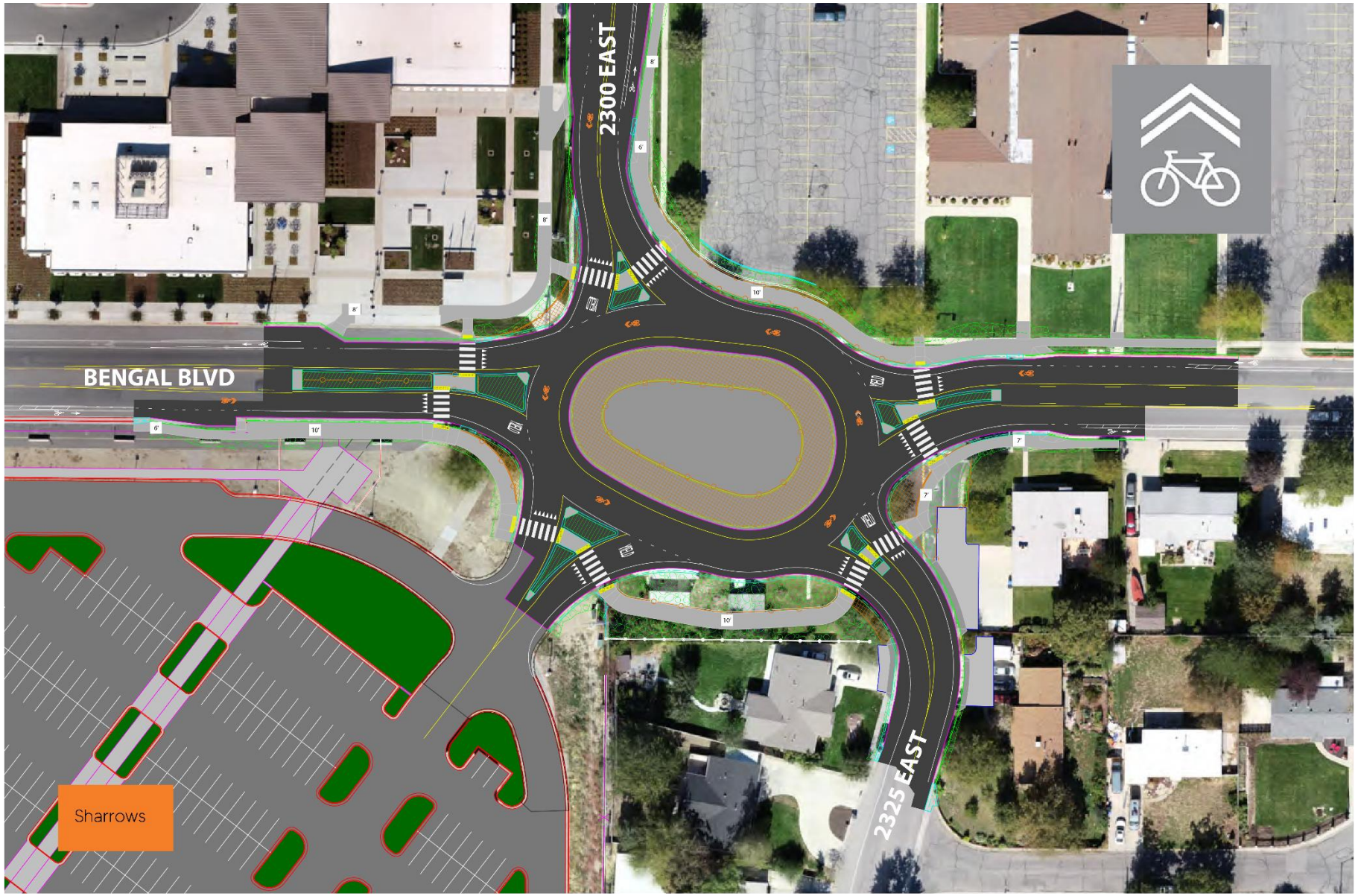

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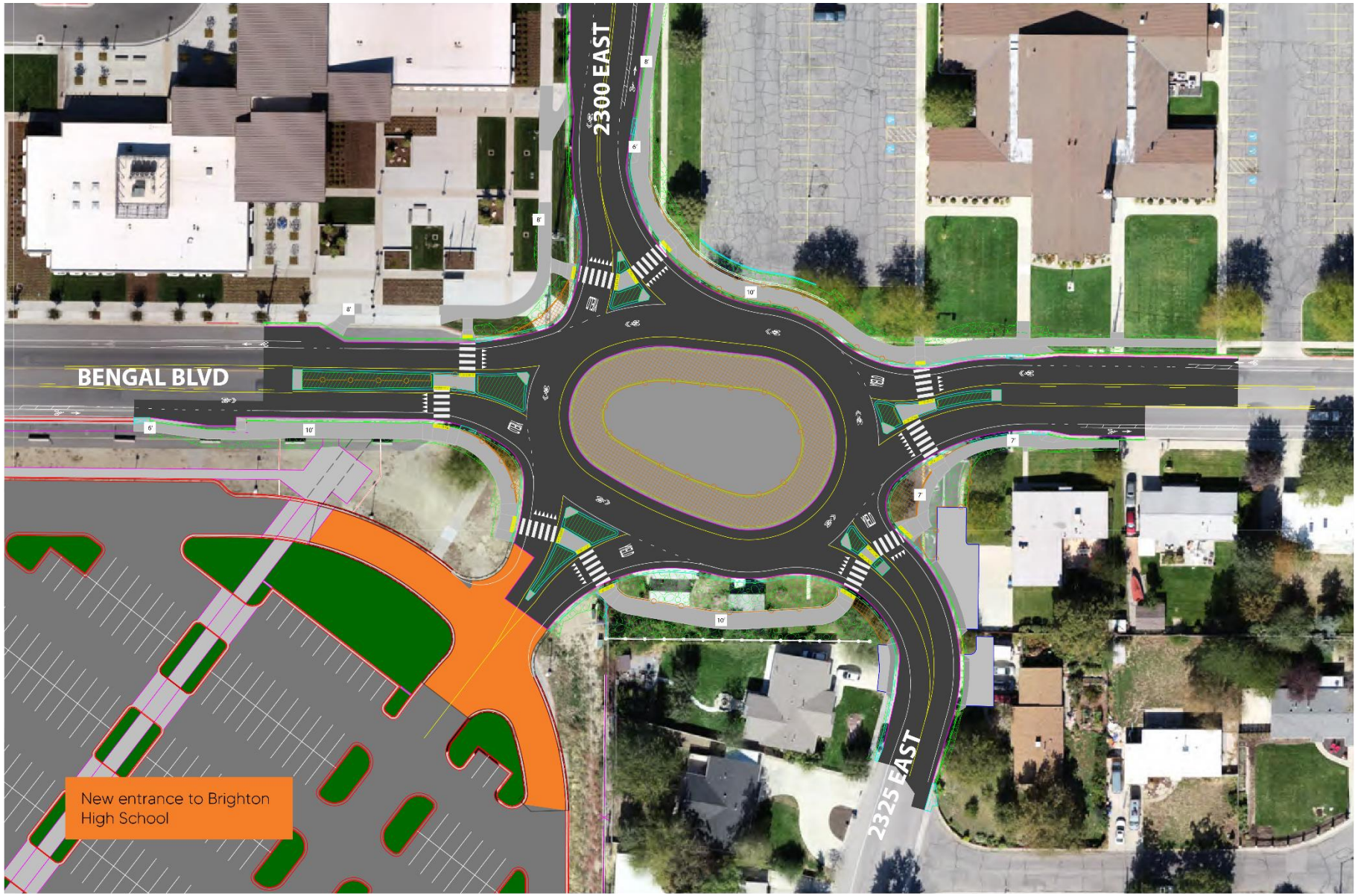

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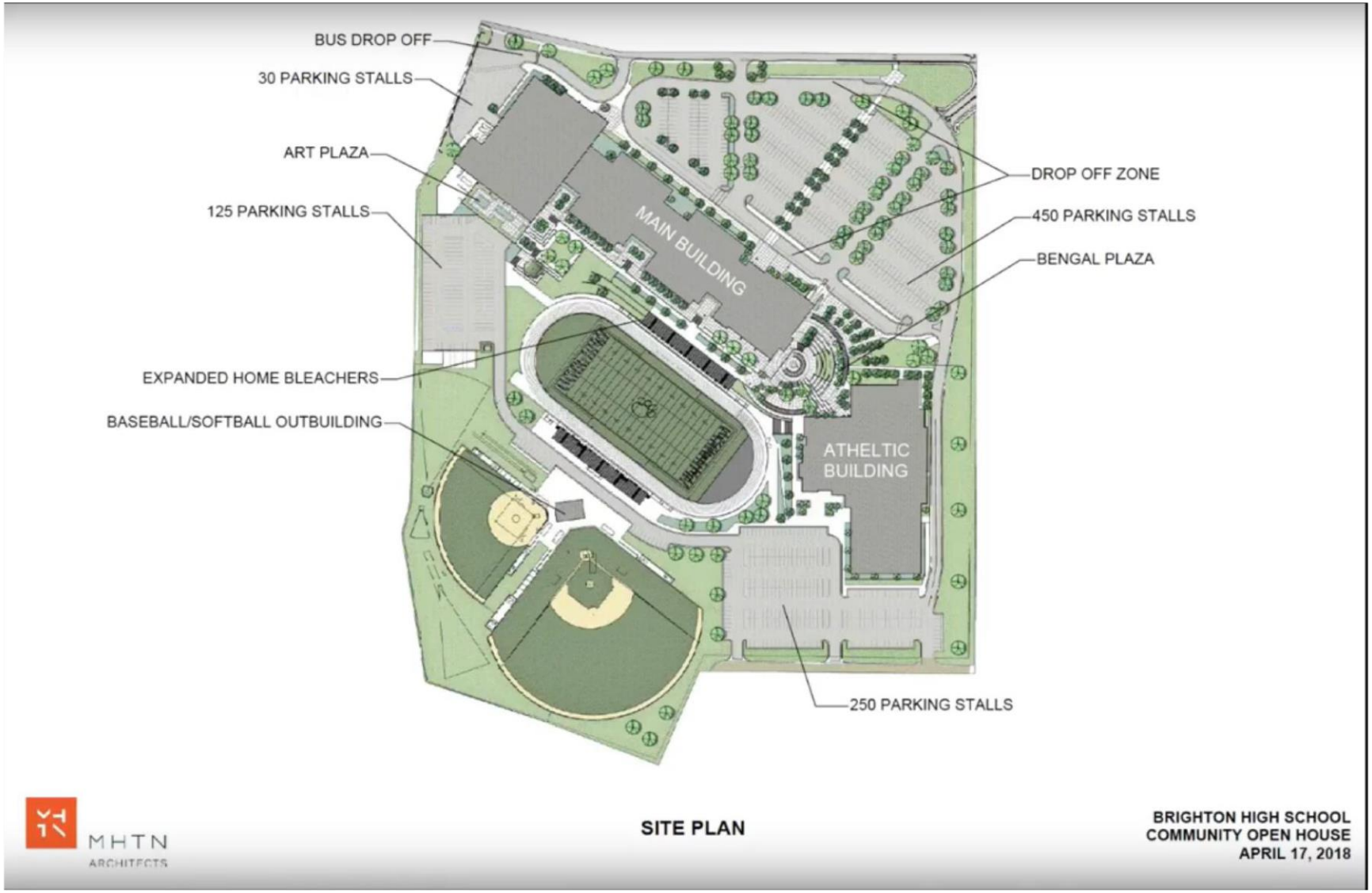
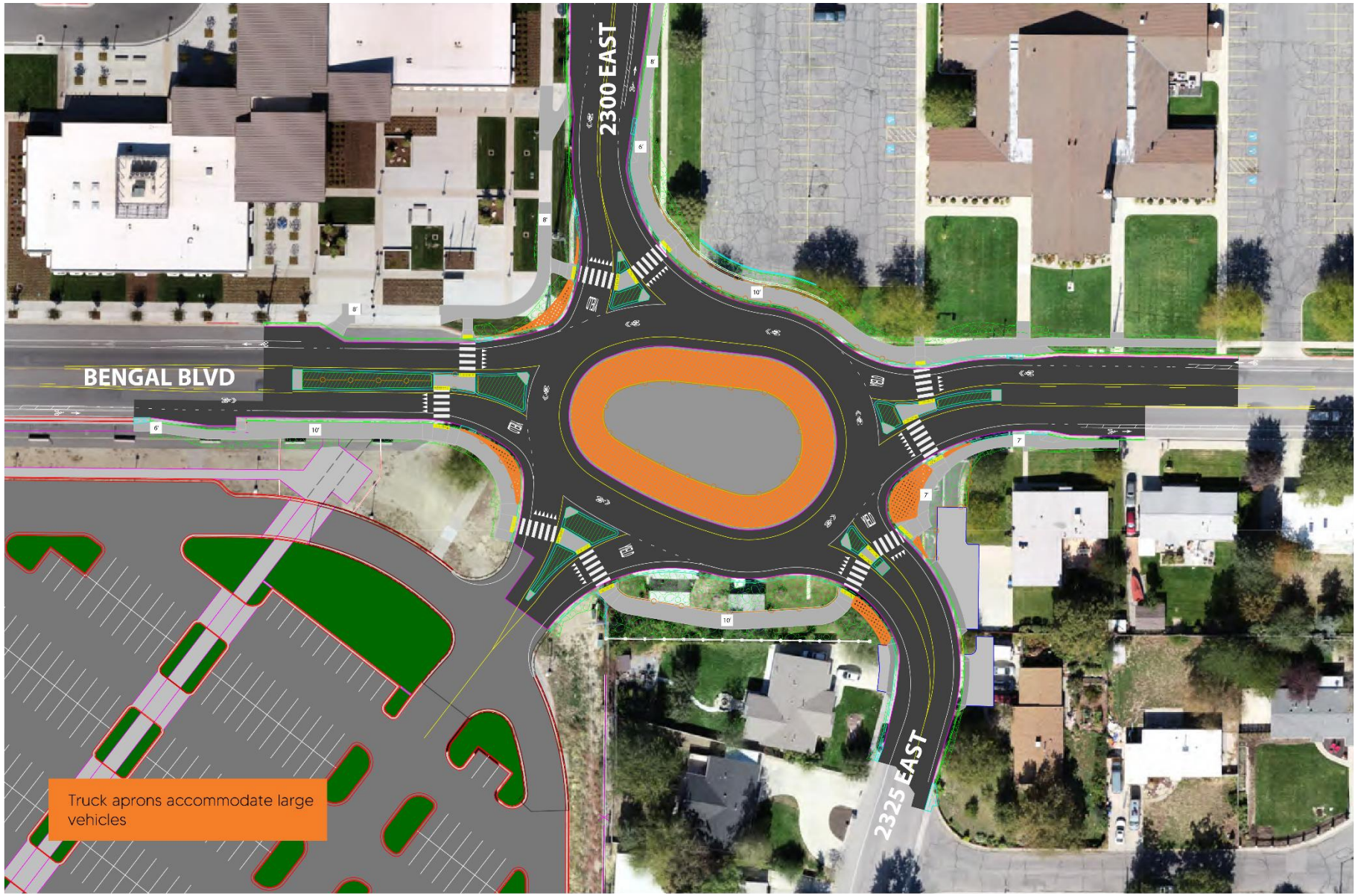


Integrates with the planned Brighton High School construction

IMPROVED ROADWAY



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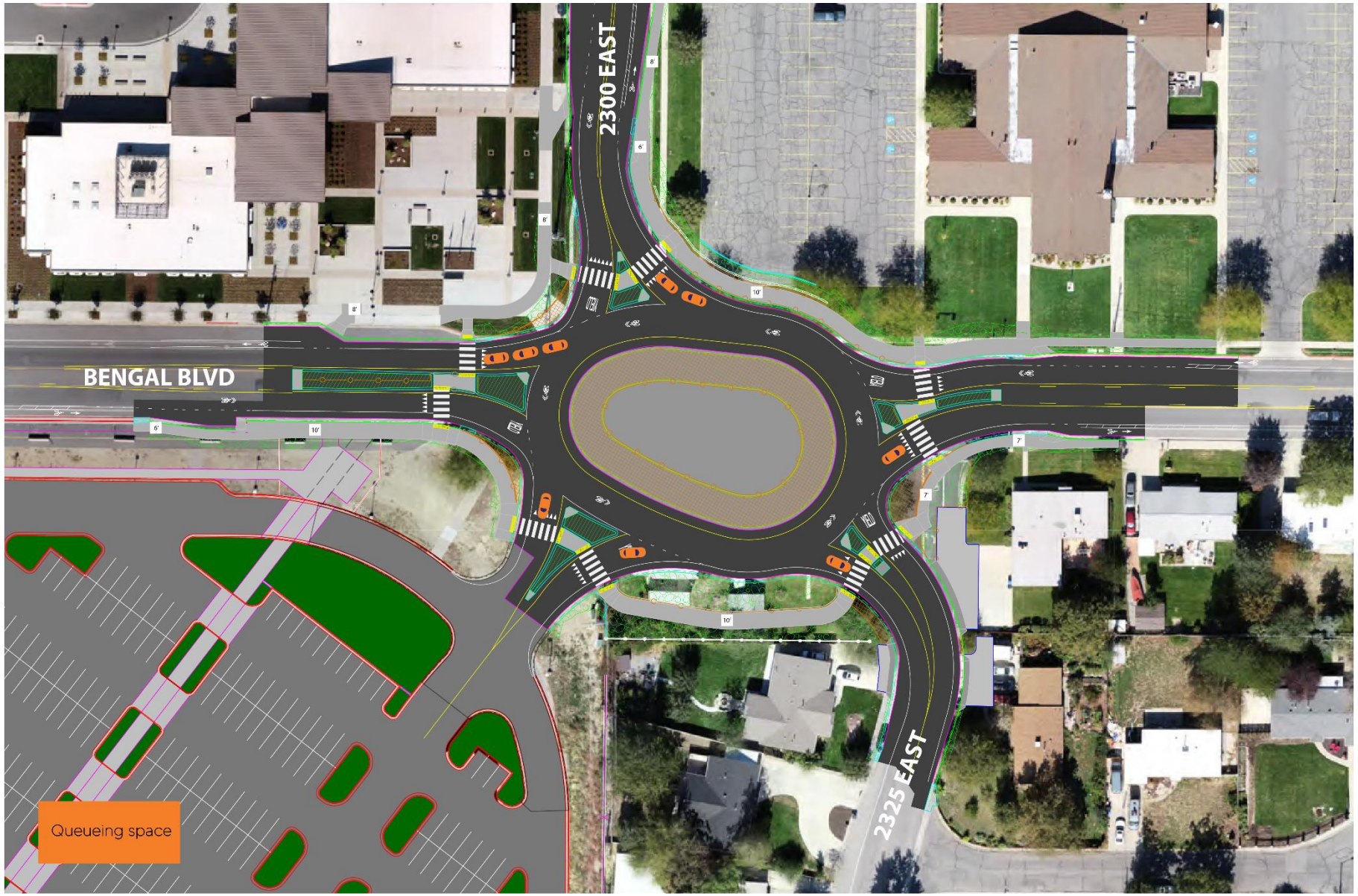

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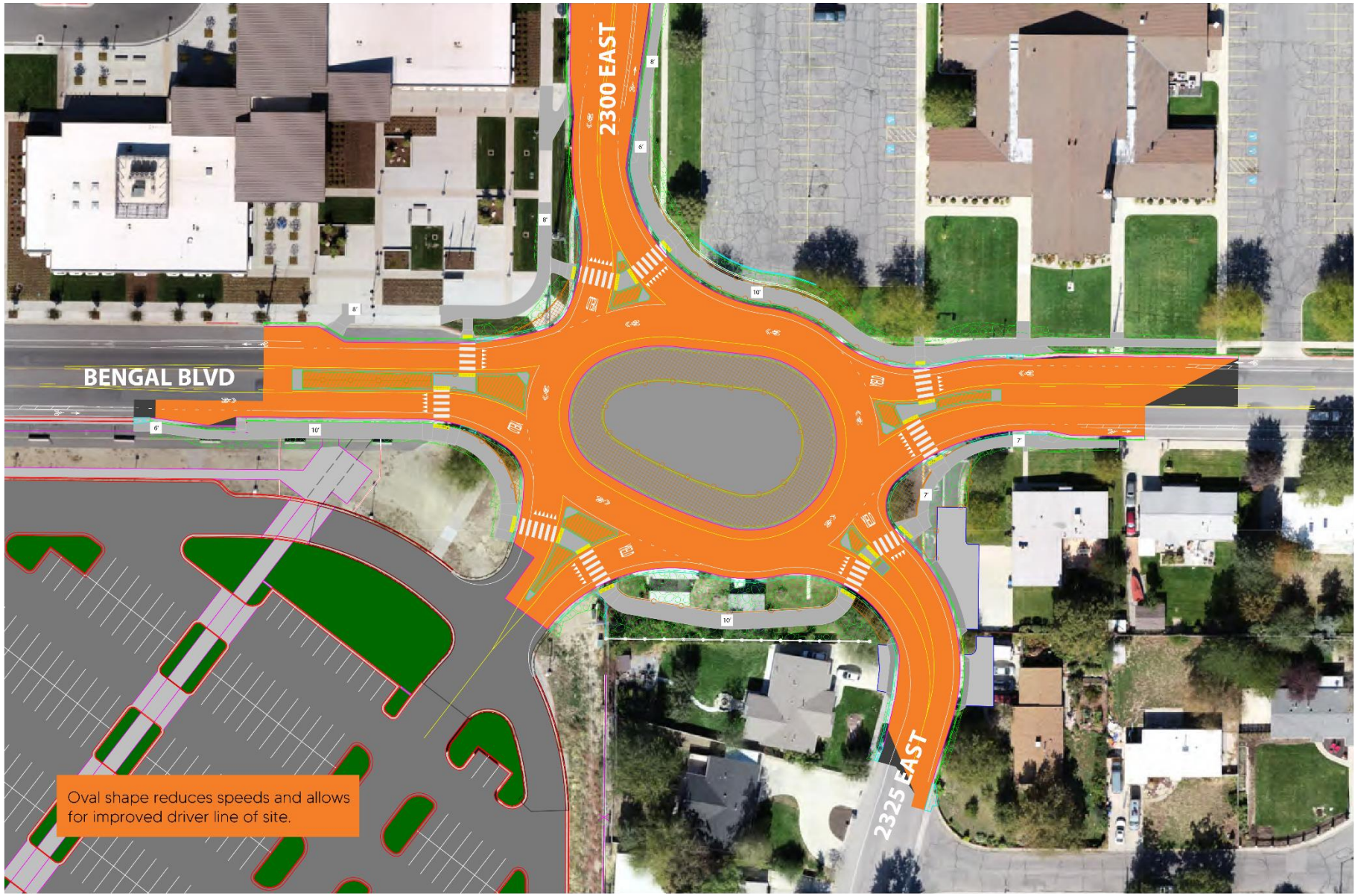

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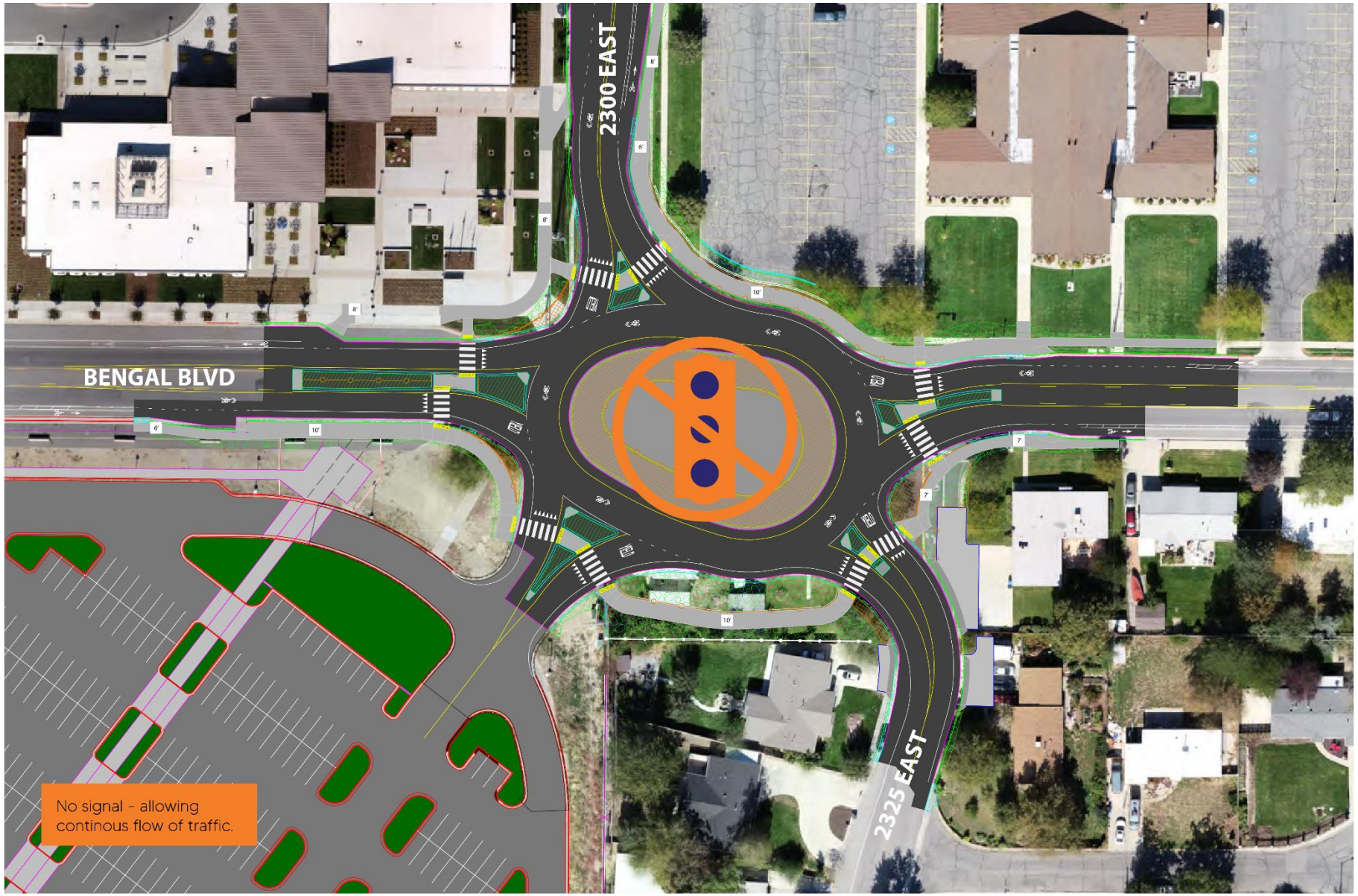

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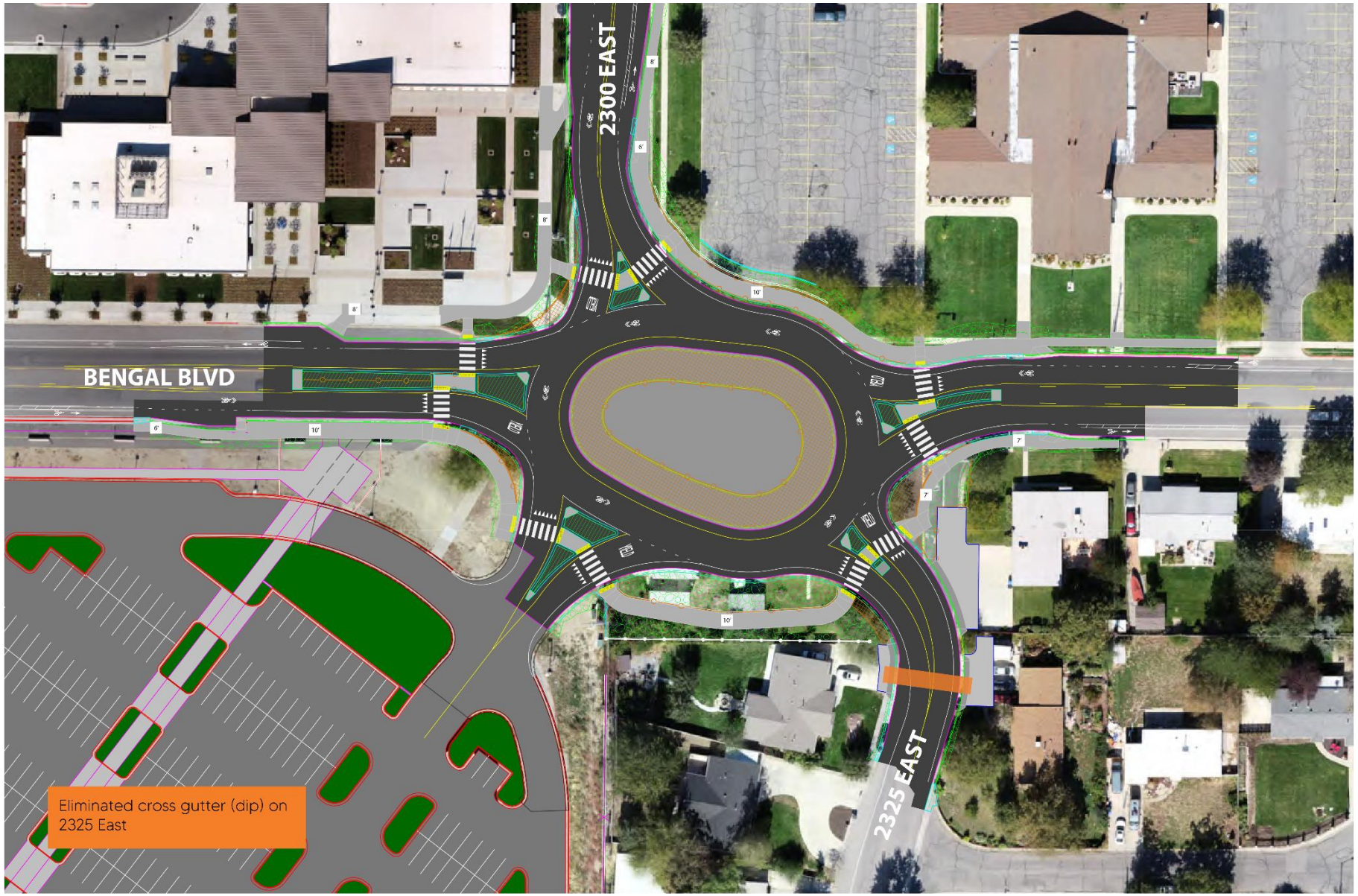
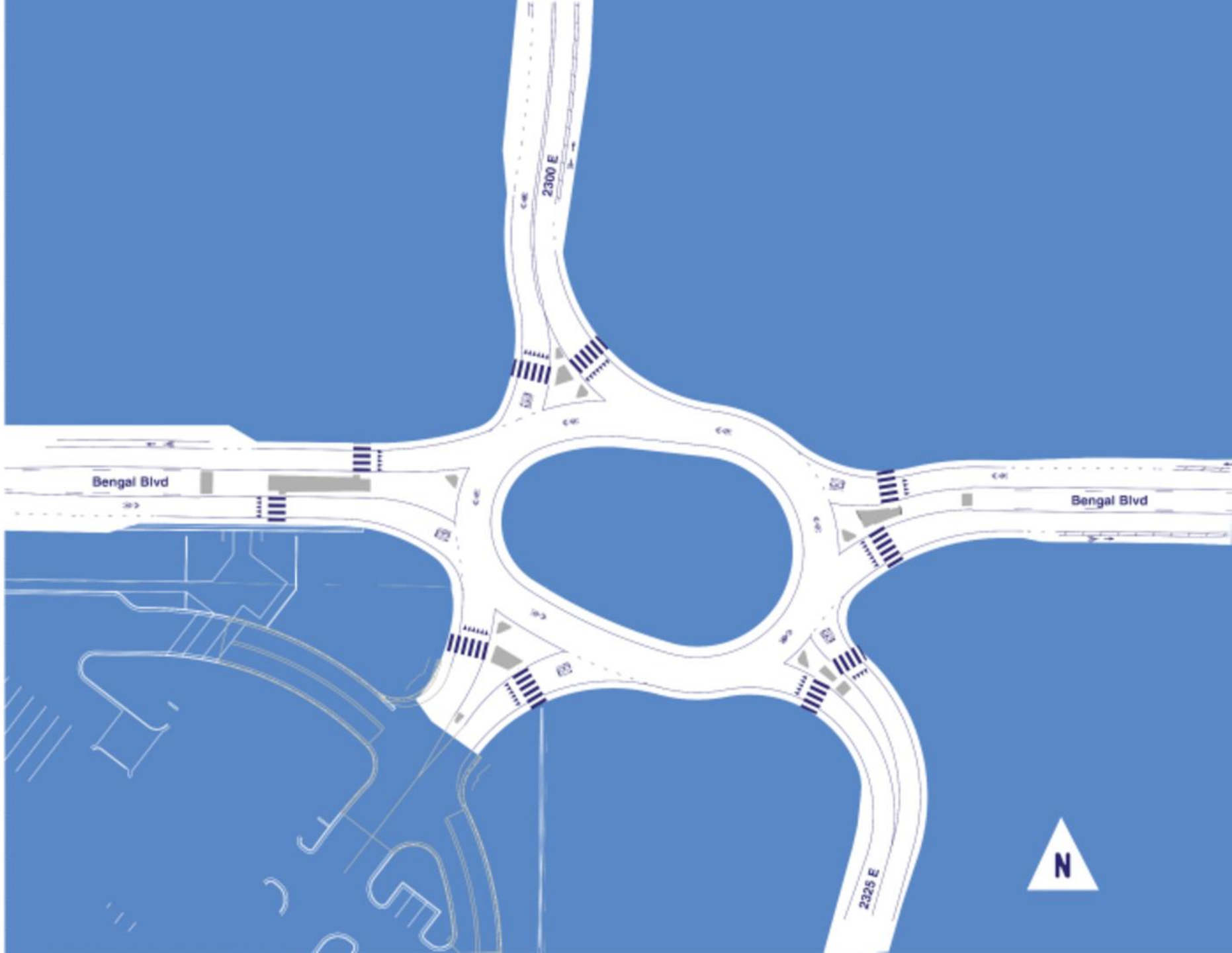


NAVIGATION



NAVIGATION

SCHEDULE

FALL 2019

Final Design

SUMMER 2020

Right-of-Way Acquisition

WINTER 2020

Bid Advertising

SUMMER 2021

Construction

HOW TO COMMENT

EMAIL

PR@ch.Utah.gov

PROJECT WEBSITE

www.cottonwoodheights.utah.gov/city-services/public-works/bengal-boulevard

THANK YOU!

Cottonwood Heights
City between the canyons